

AMENDMENTS**In the Claims:**

1. (Currently Amended) A hip prosthesis, comprising a shaft which is configured to be anchored in a medullary canal of a femur and has a distal portion which is configured to be anchored in a diaphysis,

the shaft having a core cross-section which tapers toward a distal end and which has longitudinal ribs on a lateral side and a medial side of a ribbed portion of the shaft whose height continuously increases from a proximal start of the ribbed portion of the shaft to a distal end of the ribbed portion of the shaft,

the shaft core cross-section at a distance of 1 cm from the distal end portion being substantially rectangular, with an axis ratio of at least 1:4, and, near a distal end, having a rib on each of its two lateral edges, the height of which is on average under 2 mm, the boundary of the shaft core cross-section between the two ribs located on the lateral edges not protruding further laterally from the prosthesis than the two ribs located on the lateral edges.

2. (Previously Presented) The prosthesis as claimed in claim 1, wherein a rib provided between the two ribs located on the lateral edges that protrudes from the prosthesis by not more than 2 mm further laterally than the two ribs located on the lateral edges.

3. (Previously Presented) The prosthesis as claimed in claim 1 or 2, further comprising a rib provided on each of the medial edges.

4. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein a rib provided between a rib provided on the lateral edge and a rib located on the medial edge protrudes not more than 2 mm in a ventral or dorsal direction from the prosthesis than the ribs arranged on the lateral and medial edges.

5. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein a shaft core cross-section at the proximal end is substantially rectangular with an axis ratio of at least 1:5.

6. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein the ribs have roughened surfaces.

7. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein a tapering of the core cross-section along a length of at least 4 cm is on average at least 8 mm²/cm of length.

8. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein a reduction in cross-sectional dimension in a latero-medial direction of the distal shaft portion along a length of at least 4 cm of the distal shaft portion is on average at least 0.5 mm/cm of length.

9. (Previously Presented) The prosthesis as claimed in claim 1 or 2, wherein the rib height increases from the proximal end of the distal portion to the distal end of the distal portion from less than 0.5 mm to 0.5 to 1.5 mm.

10. (Previously Presented) The prosthesis as claimed in claim 7, wherein a tapering of the core cross-section along a length of at least 4 cm is on average over 10 mm²/cm of length.

11. (Previously Presented) The prosthesis as claimed in claim 8, wherein a reduction in cross-sectional dimension in a latero-medial direction of the distal shaft portion along a length of at least 4 cm of the distal shaft portion is on average more than 0.8 mm/cm of length.